



ARIZONA GAME AND FISH DEPARTMENT HERITAGE DATA MANAGEMENT SYSTEM

Plant Abstract

Element Code: PDCAC04090

Data Sensitivity: YES

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Coryphantha recurvata* (Engelm.) Britton & Rose
COMMON NAME: Santa Cruz Beehive Cactus; Golden Chested Beehive Cactus
SYNONYMS: *Mammillaria recurvata*; *M. recurvispina*, *M. nogalensis*.
FAMILY: Cactaceae

AUTHOR, PLACE OF PUBLICATION: Britton and Rose. 1923. Cactaceae 4:27.

TYPE LOCALITY: "Sonora. Explained in the Cactaceae of the Mexican Boundary to be eastern parts of Pimeria Alta in Sonora, especially in the Sierra del Pajarito."

TYPE SPECIMEN:

TAXONOMIC UNIQUENESS: *Coryphantha recurvata* is 1 of 42 species in the genus *Coryphantha*, and 1 of 26 in the subgenus *Coryphantha*. The other subgenus is *Neocoryphantha*.

DESCRIPTION: Like all *Coryphantha* species, *C. recurvata* has a groove along the upper surface of the tubercle. *C. recurvata* has tubercles bearing large yellow or red glands. **Stems are globular with a flat top and central spine is downward curving** (recurved). Radial spines, 16 to 20, more or less recurved. This species is viviparous, forming clumps with up to 50 heads, although they are often solitary. The mound may measure up to 60.0 cm (2.0 ft.) high and 0.3-1.0 m (1.0-3.0 ft.) in diameter. Spines, at first yellow, turn gray with red tips with age, obscuring stems. **Lemon-yellow** to greenish-yellow flowers borne along upper groove of tubercle just below top of stem; flowers 2.5-4 cm (1 - 1.5 in) in diameter, 1.5 cm (0.6 in) long. Spherical green fruit (1.5 cm (0.6 in) in diameter) yields brown seeds.

AIDS TO IDENTIFICATION: The recurved central spine forms a distinctive pattern to the spine clusters.

ILLUSTRATIONS: USFWS Line drawing.

Color photo ([http://www.deserttropicals.com/Plants/Cactaceae / Coryphantha_recurvata.html](http://www.deserttropicals.com/Plants/Cactaceae/Coryphantha_recurvata.html))

Color photo (<http://arizona.cacti.home.att.net/cacti10-05.htm>)

Color photos (<http://mypage.bluewin.ch/retodicht/recurven.htm>)

Color photos (<http://home.earthlink.net/~ironwing/crecurvata.html>)

TOTAL RANGE: Southern Arizona and northern Sonora (about 20 km south of the international border), Mexico.

RANGE WITHIN ARIZONA: Western Santa Cruz County from Nogales and the Tumacacori Mountains west to the Pajarito and Atascosa Mountains.

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Succulent perennial.

PHENOLOGY: Flowers produced on stem apex in June and July, and sets fruit in late August and early September.

BIOLOGY: Hardy to 10° F (-12° C) for short periods of time.

HABITAT: Alluvial soils of valleys and foothills in desert grassland and oak woodland. Plants are either on rocky hillsides with good grass cover, or in rock crevices where runoff accumulates and provides a more favorable moisture relationship than the surrounding soils (Fletcher 1978).

ELEVATION: 3,680 - 6,000 feet (1122-1830 meters). Elevation reported between 3,500 and 5,500 ft by E. Falk (1999 draft).

EXPOSURE:

SUBSTRATE:

PLANT COMMUNITY: Semi-desert Grassland, chaparral, or Madrean evergreen woodland. Associated species include: beargrass, side-oats grama, bluestem, western coralbean, prickly pear, hop bush, rainbow cactus.

POPULATION TRENDS: Accessible populations declining due to collection; status of others unknown. Those familiar with the species say small plants (juveniles) are rarely seen- not known if reproducing well. Per E. Falk (1999 draft), "surveys conducted by Coronado NF in recent years have expanded the numbers, but not significantly increased the known range of the cactus."

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None (USDI, FWS 1996)
[Category 1 USDI, FWS 1993]
[Category 1 USDI, FWS 1990]

STATE STATUS:**OTHER STATUS:**

[Category 2 USDI, FWS 1985]
[Category 2 USDI, FWS 1983]
[Category 1 USDI, FWS 1980]
[PTN-T USDI, FWS 1975]
Highly Safeguarded (ADA 1993)
Forest Service Sensitive (USDA, FS Region
3 1990, 1999)
None (USDI, BLM AZ 2005)
[Bureau of Land Management Sensitive
(USDI, BLM AZ 2000)]

MANAGEMENT FACTORS: Local endemic, small populations, small amount of habitat. Illegal collecting; degradation of habitat due to livestock grazing; road construction and maintenance.

Fetcher (1978) and Kaiser (Phillips 1979) cite the importance of grass cover for protection from desiccation and to obscure them from collectors.

CONSERVATION MEASURES TAKEN: One site is located in the Goodding Research Natural Area.

SUGGESTED PROJECTS: Surveys in U.S. and Mexico; placing signs along the Ruby Road, indicating cacti collecting is illegal. Conduct fire ecology study. Evaluate commercial use/collecting. Gather known locality information and enter into the data base.

LAND MANAGEMENT/OWNERSHIP: USFS - Coronado National Forest; Private.

SOURCES OF FURTHER INFORMATION

REFERENCES:

- Arizona Department of Agriculture. 1993. Plant Services Division, Arizona Native Plants, Appendix A. p.1.
- Phillips, A.M., B.G. Phillips, N. Brian, L.T. Green, and J. Mazzoni. 1981. Status report for *Coryphantha recurvata*. Prepared for U.S. Fish and Wildlife Service, Albuquerque, New Mexico
- USDA, Forest Service, Region 3. 1990. Regional Forester's Sensitive Species List.
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- USDI, Bureau of Land Management. 2000. Arizona BLM Sensitive Species List. Instruction Memorandum No. AZ-2000-018.
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- USDI, Fish and Wildlife Service. 1996. Endangered and Threatened Wildlife and Plants; Review of Plant and Animal Taxa that are Candidates for Listing as Endangered or Threatened Species; Notice of Review. Proposed Rule. Federal Register 61(40):7595-7613.

MAJOR KNOWLEDGEABLE INDIVIDUALS:

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Jack Kaiser - Retired (USDA) Nogales, Arizona.
Frank Reichenbacher - Southwestern Field Biologists, Tucson, Arizona.

ADDITIONAL INFORMATION:

One of the most handsome of all *Coryphantha* species.

Prized by collectors. Over many years, Paul Shaw (Fletcher 1978) watched a population near the Ruby Road reduced in size by commercial cactus collectors.

Warren et al. found *Coryphantha recurvata* in the Pajarito Mountains a few miles south of the U.S./Mexico border on August 10-12, 1990.

Plant removed from Candidate status in 1996 NOR,

Revised: 1991-12-04 (SR)
1998-01-06 (SSS)
2001-12-11 (SMS)

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